



**DEPARTMENT OF TRANSPORTATION**  
**MATERIALS TRANSPORTATION BUREAU**  
WASHINGTON, D.C. 20590

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**Title 49—Transportation**  
**CHAPTER I—MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF**  
**TRANSPORTATION**

[Docket No. HM-144; Amdt. Nos. 173-117, 179-23]

**PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND**  
**PACKAGINGS**

**PART 179—SPECIFICATIONS FOR TANK CARS**

**Shippers; Specification for Pressure Tank Car Tanks**

**AGENCY:** Materials Transportation  
Bureau, DOT.

**ACTION:** Final rule.

**SUMMARY:** As a result of a series of recent serious railroad accidents involving certain uninsulated pressure tank cars transporting hazardous materials, and to effect early safety im-

provement in the use of these tank cars, the period of time for the retrofit program specified in this docket under amendments numbered 173-108 and 179-19 is shortened as follows:

1. Existing specification 112 and 114 tank cars used to transport flammable gases such as propane, vinyl chloride and butane, whose owners have elected to retrofit with jacketed insulation and integral tank head protection (known as the "J" retrofit), are to be retrofitted over a 3-year period ending on December 31, 1980 (former deadline: December 31, 1981).

2. Existing specification 112 and 114 tank cars used to transport flammable gases such as propane, vinyl chloride and butane, whose owners have elected to retrofit with a nonjacketed thermal protection system and tank head protection (known as the "T" retrofit) are to be retrofitted with tank head protection over a 2-year period ending December 31, 1979 (former deadline: December 31, 1981), and with the non-jacketed thermal protection system over a 3-year period ending on December 31, 1980 (former deadline: December 31, 1981).

3. Existing specification 112 and 114 tank cars used to transport anhydrous ammonia exclusively (the "S" retrofit) are to be retrofitted with tank head protection over a 2-year period ending on December 31, 1979 (former deadline: December 31, 1981).

4. Existing specification 112 and 114 tank cars, regardless of the hazardous lading being transported, are to be retrofitted with special couplers designed to resist coupler vertical disengagements over a time period ending on December 31, 1978 (former deadline: June 30, 1979).

**EFFECTIVE DATE:** These regulations are effective July 13, 1978.

**ADDRESS:** All written comments received in this proceeding are available for examination during regular business hours in room 6500, Trans Point Building, 2100 Second Street SW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:**

William F. Black, Office of Safety, Federal Railroad Administration, 202-426-2748.

**SUPPLEMENTARY INFORMATION:** These amendments are the result of the joint efforts of the Federal Railroad Administration (FRA) and the Materials Transportation Bureau (the Bureau). In accordance with internal DOT procedures, the FRA has developed the substantive provisions of these amendments for review and issuance by the Bureau. Accordingly, further information concerning substantive provisions of these amendments may be obtained from the above contact.

## BACKGROUND INFORMATION

### EMERGING NEED FOR EXPEDITED RETROFIT

On September 15, 1977, the Bureau published in the FEDERAL REGISTER (42 FR 46308) a final rule concerning specifications for tank cars which included the following timetable:

1. Existing specification 112 and 114 tank cars used to transport flammable gases were to be retrofitted with thermal protection and tank head protection (such as a "head shield") over a 4-year period ending on December 31, 1981.

2. Existing specification 112 and 114 tank cars used to transport anhydrous ammonia were to be retrofitted with tank head protection (such as a head shield) over a 4-year period ending on December 31, 1981.

3. All specification 112 and 114 tank cars were to be equipped with special couplers designed to resist coupler vertical disengagements. These couplers were to be retrofitted on all cars by July 1, 1979.

Major accidents at Pensacola, Fla., on November 9, 1977, at Waverly, Tenn., on February 22, 1978, and at Lewisville, Ark., on March 29, 1978, in combination with an incident of apparent vandalism near Youngstown, Fla., on February 26, 1978, focused attention on measures to improve the safety of rail transportation of hazardous materials.

As a result of these accidents and subsequent hearings conducted by Congress, the National Transportation Safety Board and the FRA, the Bureau published a notice of proposed rulemaking, Docket No. HM-144; Notice No. 78-5 (43 FR 20250; May 11, 1978). The purpose of that notice was to elicit public comment on a proposed rule to accelerate the time schedule for the retrofit program specified in this docket under amendments numbered 173-108 and 179-19.

The reasons for adopting a shortened retrofit program were discussed in considerable detail in the notice. Interested persons were invited to participate in the rulemaking proceeding through the submission of written comments. Thirty-nine submissions were received and have been fully considered by the FRA and the Bureau in the development of this final rule.

In response to comments received, four changes have been made in the final rule.

1. In § 173.314 paragraph (c) table, the date in note 24 has been revised. This date is now December 31, 1980, and is consistent with the date in note 23.

2. In § 179.105-1 paragraph (c)(1) has been revised. The date for coupler retrofit for Canadian-owned tank cars moving under load in the United States has been extended 3 months to March 31, 1979, and permission grant-

ed for "empty" return movement to Canada of these nonequipped cars until July 1, 1979.

3. In § 179.105-1 paragraph (c)(2) has been revised to make the requirements applicable to Canadian-owned 112 and 114 tank cars consistent with those applicable to United States owned 112 and 114 tank cars when the retrofit program has been completed.

4. In § 179.105-3 paragraph (d)(3)(i) the percentage of "J" retrofits that must be completed by December 31, 1978, has been established at 20 percent. This is the percentage required by amendment 179-19.

## SECTION-BY-SECTION ANALYSIS

### SECTION 173.31 QUALIFICATION, MAINTENANCE, AND USE OF TANK CARS

The notice proposed to reduce the retrofit time period for application of shelf couplers by 6 months from June 30, 1979, to December 31, 1978. Several commenters suggested that, although adequate supplies of shelf couplers might be fabricated by the end of 1978, they doubted that 100 percent of the cars could be equipped by that date. Logistical problems were cited. Several suggestions were offered:

1. Retain the June 30, 1979, date;

2. Use March 31, 1979, as the required date; and

3. Permit "empty" tank cars not equipped with shelf couplers to be transported after December 31, 1978, for either 3 or 6 additional months.

Information available to the FRA and the Bureau indicates that an adequate supply of shelf couplers will be manufactured during 1978 for retrofitting all of the 112 and 114 tank cars. However, it is recognized that getting the couplers to the tank cars may present problems. Shelf couplers manufactured during the last quarter of 1978 will need to be installed rapidly and the railroads have indicated that they will assist in this retrofit installation. They have designated specific repair facilities located along the major 112 and 114 tank car routes to stock these couplers and perform the retrofit. Likewise, in order to reduce this logistical problem of getting the tank car and the shelf couplers together, several car owners are utilizing portable installation equipment and installing their shelf couplers at shipper and consignee facilities.

While an "empty" tank car does not present the same degree of hazard as does a loaded tank car, an "empty" tank car can transport up to 1,000 gallons of product. Puncture of a car containing 1,000 gallons of propane or anhydrous ammonia could cause a serious hazardous materials accident. Tank cars, either in storage or after being unloaded, can be equipped with shelf couplers using portable equipment at the storage and unloading sites.

PART 1

For these reasons the FRA and the Bureau believe that the December 31, 1978, date is sound and consistent with the goal of upgrading the safety in using these tank cars as quickly as is possible. It is recognized that compliance will require the close cooperation of the coupler suppliers, tank car owners, tank car users, and the railroads but all evidence indicates that this retrofit program can be completed by December 31, 1978, if these parties make a diligent effort.

#### SECTION 173.314 REQUIREMENTS FOR COMPRESSED GASES IN TANK CARS

Several commenters recommended that in note 24, the date be December 31, 1980, so as to be consistent with the date in note 23 and so as to enable tank cars scheduled for the jacketed ("J") retrofit to be used in anhydrous ammonia service in 1980 while awaiting such retrofit. The FRA and the Bureau concur. Accordingly, note 24 has been amended to prohibit the shipment of anhydrous ammonia in 112 and 114 tank cars not equipped with head shields after December 31, 1980.

#### SECTION 179.105-1 GENERAL

Paragraph (c) of this section covers specification 112 and 114 tank cars manufactured to specifications promulgated by the Canadian Transport Commission (CTC). Amendment 179-19 required CTC specification 112 and 114 tank cars operating in the United States to comply with the DOT special requirements not later than December 31, 1981. The subsequent notice proposed to require shelf couplers installation not later than December 31, 1978, and require all other retrofitting not later than December 31, 1980.

Information received from Canadian owners and shippers, as well as the CTC, indicates that some 3,300 specification 112 and 114 tank cars were built to CTC specifications. The majority will be retrofitted to the "J" specification.

Two Canadian respondents questioned the December 31, 1980, deadline. They stated that this deadline might cause lessors to take tank cars out of "international" service (service between Canada and the United States) for up to 2 years. The FRA and the Bureau believe that this entire retrofit program must be completed by December 31, 1980, so as to assure adequate safety in the transportation of liquefied flammable gases and anhydrous ammonia in these tank cars. For this reason, the December 31, 1980, date is adopted.

Considerable comments were made concerning the December 31, 1978, shelf coupler retrofit deadline.

Canadian commenters reminded the FRA and the Bureau that under the December 31, 1981, deadline the Canadian

tank car owners had approximately 4 years to install shelf couplers. Under the proposed revised deadline, this retrofit must be accomplished within less than 1 year for CTC specification tank cars used in "international" service. Commenters indicated that while approximately 80 percent of the CTC cars were in "international" service, the Canadian goal is 100-percent application of shelf couplers to these cars to provide maximum flexibility in utilization.

Canadian coupler manufacturers have just begun to produce type "E" shelf couplers and indicate that quantity production of type "F" shelf couplers will not begin before December 1978. Canadian tank car owners indicate that approximately 70 percent of their 112 and 114 tank cars require type "E" shelf couplers and 30 percent require type "F" shelf couplers.

This information on Canadian shelf coupler requirements and availability is new. It was not developed at the FRA special safety inquiry held in April and was not available to either the FRA or the Bureau. In light of these Canadian comments and since the proposed revised retrofit schedule compresses the Canadian-owned tank car coupler requirements from 4 years to 1 year, paragraph (c) has been modified:

1. The deadline for loaded CTC specification 112 and 114 tank cars moving in the United States to be equipped with shelf couplers is not later than March 31, 1979; and

2. The deadline for "empty" CTC specification 112 and 114 tank cars moving in the United States returning to Canada is by July 1, 1979.

Although "empty" tank cars present a hazard, the FRA and the Bureau recognize the difficulties in retrofit installing Canadian-manufactured shelf couplers on Canadian-owned tank cars while these cars are in the United States. In addition to logistical problems, such an operation can present unique "international" problems such as customs taxation. To reduce this type of difficulty, it has been decided to extend "empty" tank car movement rights to Canadian tank cars for 3 months so that they may return to Canada for shelf coupler retrofit.

It is recognized that this schedule is tight, but the FRA and the Bureau believe that promulgation of this schedule is essential to upgrade safety when CTC specification 112 and 114 tank cars are traveling in the United States. Further, the FRA and the Bureau are aware that the Canadian railroads have indicated a willingness to assist in the coupler retrofit program and have established a procedure for changing couplers while the tank cars are in rail transportation. Also, portable installation operations can be utilized in Canada.

Another problem mentioned by Canadian commenters was with paragraph (c)(2) of this section. In the notice this paragraph indicated that all compressed gases being transported in CTC 112 and 114 tank cars moving in the United States after December 31, 1980, would have to have such tank cars equipped with thermal protection and tank head puncture resistance. The effect of this requirement would be to place more stringent regulations on CTC 112 and 114 tank car shipments than those imposed on similar DOT specification tank car shipments. This difference was not intended. Accordingly, paragraph (c)(2) in § 179.105-1 has been amended to indicate that after December 31, 1980, CTC specification 112 and 114 tank cars:

1. Transporting flammable compressed gases in the United States shall have the prescribed thermal protection and tank head puncture resistance; and

2. Transporting anhydrous ammonia in the United States shall have the prescribed tank head puncture resistance.

#### SECTION 179.105-3 PREVIOUSLY BUILT CARS PARAGRAPH (A)

Paragraph (a) of this section covers retrofit installation of shelf couplers. As was stated under the analysis of § 173.31, several commenters stated that they believed that not all of the specification 112 and 114 tank cars could have shelf couplers retrofit installed by not later than December 31, 1978. For the reason stated in the analysis of § 173.31, the FRA and the Bureau believe that the December 31, 1978, deadline can be met with diligent effort by coupler suppliers, tank car owners, tank car users, and the railroads. Further, the FRA and the Bureau believe that complete coupler retrofit by the end of 1978 is necessary in order to quickly upgrade safety when these cars are being used to transport hazardous materials.

#### PARAGRAPH (D)

Paragraph (d) mandates specific retrofit schedules for performing the "S," "T," and "J" retrofits.

#### THE "S" RETROFIT SCHEDULE

The notice proposed to require complete retrofitting of all tank cars being converted to the "S" specification by December 31, 1979. One commenter stated that he doubted that all of the head shields could be retrofit installed by the end of 1979. He is concerned with out-of-service time for his anhydrous ammonia cars as well as extra transportation costs associated with empty tank car movements to retrofit repair facilities. Another commenter recommended that all head shields be applied by the end of 1978.

In the notice, the FRA and the Bureau indicated their reasons for selecting the December 31, 1979, deadline. This reasoning included the fact that due to the prolonged cold 1978 spring, many anhydrous ammonia cars were not ready for retrofitting until July and these tank cars will again be needed to store manufactured anhydrous ammonia beginning in early September. The FRA and the Bureau believe that by extending the date through 1979 so as to include two summer periods, the estimated 3,400 tank cars exclusively dedicated to anhydrous ammonia service can be retrofitted with head shields.

The question of who will pay the empty tank car transportation costs is a matter to be resolved between the tank car owners and the railroads.

#### THE "T" RETROFIT SCHEDULE

In the notice, paragraph (d)(2) proposed for "T" retrofitting that the deadlines for applying the tank head puncture resistance system ("head shields") be December 31, 1979, and for applying thermal protection be December 31, 1980. Considerable comment was received on this proposed revision of the schedule as well as the text of the preamble. Comments addressed to the statement in the preamble concerning "... the superior protective qualities of the jacketed retrofit package" will be discussed later in this analysis.

Many comments were received suggesting that the "T" retrofit schedule be the same as the "J" retrofit schedule. In the opinion of the FRA and the Bureau the "T" retrofit, particularly the application of "head shields," is easier to perform than the "J" retrofit. The jacketed method must be accomplished as a unitary process with the tank head protection, jacket shell and insulation being applied at one shop. This work can be performed at only a few locations.

At the National Transportation Safety Board special hearing on April 4, 1977, it was demonstrated that a "head shield" could be installed in approximately 94 minutes. While this example is a most specific case it demonstrates that "head shields" can be installed relatively quickly and easily as compared to full jackets and insulation.

The FRA and the Bureau believe that it is essential to install tank head puncture resistance as quickly as is possible, and that with a determined effort by industry all of these head shields can be applied by the end of 1979.

One commenter recommended that the "head shield" installation part of the "T" retrofit be required to be completed by the end of 1978. The FRA and the Bureau believe that compressing the retrofit deadline to the end of

1978 for "head shield" application would result in a considerable number of tank cars being out-of-service during the first quarter of 1979, just when they are needed the most. By establishing this deadline at December 31, 1979, this retrofit installation can be expeditiously completed with a minimum of out-of-service time.

Several commenters stated that they believed that it is unrealistic to state that "T" type retrofitting would be done in two stages; first, application of "head shields," and, second, application of thermal protection. Instead, these commenters believe that, as a practical matter, these two operations will be done at the same time. These amendments do not preclude such action. However, opportunity is being afforded to tank car owners to perform these two applications at different times. Obviously, the sooner that the entire retrofit is completed, the sooner the tank car will have the completed safety features detailed under this docket.

#### THE "J" RETROFIT SCHEDULE

In the notice, paragraph (d)(3) proposed that the deadline for performing the jacketed retrofit be compressed from 4 years to 3 years and that the cumulative percentage of tank cars required to be completed at the end of each of the 3 years be 25 percent, 65 percent, and 100 percent, respectively.

A considerable number of comments were received concerning the completion percentage for 1978 (the first year). In amendment 179-19 this percentage was 20 percent; in notice No. 78-5 the percentage was proposed to be increased to 25 percent. Comments were received to the effect that plans and commitments had been made based upon the 20-percent figure. Further, construction of one new facility for performing the jacketed retrofit is not yet complete. However, these commenters believed that the second and third year requirement of 65 percent and 100-percent retrofit could be attained.

The FRA and the Bureau concur that the increased requirement for 25 percent completion by December 31, 1978, may not be attainable. Therefore, the 20-percent figure published under amendment 179-19 has been retained. The December 31, 1979, figure of 65 percent and the December 31, 1980, figure of 100 percent which were proposed in notice No. 78-5 appear to be attainable. Therefore, these percentages have been adopted as proposed in the notice.

#### COMMENTS CONCERNING ALLEGED "SUPERIOR PROTECTIVE QUALITIES" OF JACKETEDS

Several commenters have questioned the references in the notice of pro-

posed rulemaking and subsequent departmental statements to the "superior protective qualities" of the jacketed retrofit. The point which was intended by these statements was that the presence of steel jacketing provides additional, if limited, protection against puncture or pressure vessel failure in an accident environment. This conclusion was based on the Department's extensive experience with the performance of steel jacketed insulated tank cars in actual service over a number of years.

Subsequent to the issuance of the notice, a major tank car company conducted tests of the particular thermal coating which it had selected for use in the retrofit program. The results of those tests were submitted for consideration in relation to the present rulemaking. The tests were designed to evaluate the extent to which the particular thermal coating might assist in preventing puncture and weakening of the tank shell. Under the test protocol employed, the resulting data indicated that the thermal coating provided protection at least equivalent to that afforded by a conventional jacketed system.

The FRA and the Bureau believe that the development of this new data underscores the validity of statements made by various commenters to effect that no official preference should have been expressed in this rulemaking action for any particular system of protective devices which can be shown to meet the minimum thermal and tank head puncture resistance performance standards established by the substantive regulations.

It is the position of the Department that the retrofit should go forward as quickly as is feasible, with each tank car owner making such elections as the owner may deem appropriate in light of overall safety considerations. As pointed out by several commenters, disruptions in retrofit elections will result in a delay of the overall retrofit process. However, it remains true that the jacketed method requires somewhat more time, must be accomplished as a unitary process, and can be installed at only a few locations. For these reasons, the final rule, like the proposed rule, distinguishes between the "J" and "T" retrofits with respect to deadlines for the application of tank head protection.

#### COMPLIANCE REPORTING

One commenter recommended that tank car owners be required to periodically report their retrofit progress and that this information be published periodically in the FEDERAL REGISTER.

On June 8, 1978, the Bureau published a notice of proposed rulemaking under docket No. HM-144 covering "Compliance Reporting" (notice No. 78-8; 43 FR 24865; June 8, 1978). The



Purpose of that notice is to elicit public comment on a proposal requiring DOT specification 112 and 114 tank carowners to provide a listing of those tank cars and report progress toward completion of retrofit plans. Accordingly, this comment will be considered when analyzing the response to notice 78-8.

#### WITHDRAWAL FROM SERVICE COMPARED TO RETROFITTING

One commenter indicated that he planned to withdraw his 112 and 114 tank cars from service by a combination of conversion (to DOT specification 111) and scrapping. He desired relief from the complete retrofit schedule provided he withdrew tank cars at the rate prescribed by the "J" retrofit schedule. While the FRA and the Bureau understand the problems being encountered by this tank carowner in converting his existing small capacity (12,000-15,000 gallon) uninsulated pressure tank cars to "economic" tank cars, it is believed that early installation of shelf couplers and speedy retrofit conversion of tank cars, according to their intended use, is essential in order to attain an adequate level of safety. Accordingly, no relief is wanted to this commenter, or any other carowner, to substitute "withdrawal" from service for retrofitting.

Likewise, another owner of a very few number of 112 tank cars desires relief from the shelf coupler deadline because he is endeavoring to sell or otherwise dispose of these tank cars. Since the purpose of this provision is to achieve safety through the application of coupler vertical separation restraint, and since it is not directed to any one or group of owners, but is instead directed to all tank cars, no exception to the shelf coupler deadline is being granted. It should be noted that 112A and 114A tank cars equipped with shelf couplers may be used for the transportation of nonflammable compressed gases (except anhydrous ammonia) and hazardous liquids without further safety modification.

#### WAIVER OF FRA PERIODIC INSPECTION DEADLINE

One respondent requested a waiver of the FRA periodic inspection requirements for his hazardous materials laden tank cars. While it is not a part of this rulemaking, the FRA and the Bureau consider the periodic freight car inspection to be an important method of effecting an eventual overall reduction of railroad accidents. It is believed that both the FRA periodic inspection program and the HM-4 retrofit program are essential to safety and both can be carried out at the same time. However, since the railroad safety requirements are administered by the FRA, requests for waiver should be addressed to that Administration.

#### EFFECT OF STRIKES, ETC.

One commenter has notified the Department that his retrofit activities are at a standstill because of a strike at two of his facilities. Another commenter indicates difficulty due to construction delay of a new facility.

The FRA and the Bureau appreciate that problems develop in any safety program. However, the need to provide for public safety outweighs acquiescence to these problems, and it is believed that solutions are available. It will be the policy of the Department in this retrofit matter not to issue waivers nor exemptions, but rather to assure that these regulations are adhered to in the manner and on the dates prescribed.

#### ECONOMIC IMPACT

In analyzing the effect of accelerating the retrofit schedule the FRA and the Bureau have attempted to identify additional costs resulting from compression of the schedule. A specific possible increased cost of \$900,000 has been identified for nonjacketed thermal protection and separate tank head protection application. Other additional costs are not identifiable in definitive terms, and commenters did not present definitive information on specific costs to be incurred solely as a result of this accelerated schedule. However, the Bureau recognizes that compliance with the compressed retrofit schedule contained in this amendment will result in some additional costs such as overtime payments, second and third shift differential payments, and possible premium payments for components. Also there may be additional transportation costs associated with "double shopping" of a small number of DOT specification 112T and 114T tank cars, as well as some additional labor costs. It is the belief of the FRA and the Bureau that such additional costs will be only a small percentage of the cost of the initial rule and that the benefits to public safety and industry of accelerating the retrofit of these safety features will far outweigh any additional cost.

Primary drafters of this document are William F. Black and Rolf Mowatt-Larssen, Office of Safety, and Edward F. Conway, Jr., Office of the Chief Counsel, Federal Railroad Administration, and George W. Tenley, Jr., Office of the Chief Counsel, Research and Special Programs Administration.

In consideration of the foregoing, parts 173 and 179 of Title 49, Code of Federal Regulations are amended as follows:

1. In § 173.31 paragraph (a)(5) is revised to read as follows:

§ 173.31 Qualification, maintenance, and use of tank cars.

(a) \* \* \*

(5) After December 31, 1978, each specification 112 and 114 tank car built before January 1, 1978, must be equipped with shelf couplers in accordance with § 179.105-6 of this subchapter.

2. In § 173.314 paragraph (c) table note 23 and note 24 are revised to read as follows:

§ 173.314 Requirements of compressed gases in tank cars.

(c) \* \* \*

NOTE 23.—After December 31, 1980, each specification 112 and 114 tank car built before January 1, 1978, used for the transportation of flammable gases must be equipped with thermal protection and tank head puncture resistance systems in accordance with § 179.105 of this subchapter.

NOTE 24.—After December 31, 1980, each specification 112 and 114 tank car built before January 1, 1978, used for the transportation of anhydrous ammonia must be equipped with a tank head puncture resistance system in accordance with § 179.105 of this subchapter.

3. In § 179.105 paragraph (c) in § 179.105-1 is revised; paragraphs (a) and (d) in § 179.105-3 are revised to read as follows:

§ 179.105 Special requirements for specifications 112 and 114 tank cars.

§ 179.105-1 General.

(c) Notwithstanding the provisions of § 173.8 of this subchapter, no. 112 and 114 tank car manufactured to specifications promulgated by the Canadian Transport Commission may be used:

(1) After March 31, 1979, to transport hazardous materials in the United States unless it is equipped with a coupler vertical restraint system under § 179.105-6, except that an "empty" tank car (paragraph 172.510(c) of this subchapter) may be returned to Canada without a coupler vertical restraint system until July 1, 1979; nor

(2) After December 31, 1980, to transport flammable gases in the United States unless it is equipped with thermal protection under § 179.105-4 and tank head puncture resistance under § 179.105-5; and, to transport anhydrous ammonia in the United States unless it is equipped with tank head puncture resistance under § 179.105-5.

§ 179.105-3 Previously built cars.

(a) After December 31, 1978, each specification 112 and 114 tank car

built before January 1, 1978, shall be equipped with a coupler restraint system that meets the requirements of § 179.105-6.

\* \* \* \* \*

(d) Each tank car owner shall equip its tank cars which are subject to paragraphs (b) and (c) of this section in accordance with the following schedule:

(1) Each tank car which is being retrofitted in accordance with paragraph (b) shall be retrofitted not later than December 31, 1979.

(2) Each tank car which is being retrofitted in accordance with paragraph (c) with a nonjacketed thermal protective system and a separate tank head puncture resistance system (112T/114T) shall be retrofitted:

(i) With the tank head puncture resistance system not later than December 31, 1979; and

(ii) With thermal protection not later than December 31, 1980.

(3) All tank cars being retrofitted in accordance with paragraph (c) with a

thermal protective system enclosed in a metal jacket (112J/114J) shall be retrofitted such that—

(i) At least 20 percent of those cars owned on December 31, 1978, are so equipped by not later than that date;

(ii) At least 65 percent of those cars owned on December 31, 1979, are so equipped by not later than that date; and

(iii) All of those cars owned on December 31, 1980, are so equipped by not later than that date.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e).)

NOTE.—The Materials Transportation Bureau has determined that this document does not contain a major proposal requiring preparation of an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.).

Issued in Washington, D.C., on July 7, 1978.

L. D. SANTMAN,  
*Acting Director,*

*Materials Transportation Bureau.*

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